

Planting Roses — Then and Now

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As we approach the fall and lowered temperatures, many rosarians begin thinking about planting new bushes. New varieties pique their interest or that older variety is wearing out its welcome in the garden. Container grown Fortuniana grafted roses, the type preferred by Deep South rosarians, cost \$25 or more when bought at local nurseries or at several mail order distributors. With this much investment in a bush, it is surprising how many buyers spend little effort, time, and money on preparing where the new variety will live, the planting hole. Just digging a hole and putting it in the ground is not acceptable if one expects to have a vigorous and well performing rose bush.

The official State Soil of Florida (yes, we have one) is something called Myakka and consists of a surface layer of fine gray sand, a subsurface layer of light gray fine sand, a subsoil of dark reddish brown fine sand with organic stains, and a substratum of brown and yellowish brown fine sand. Note the recurring word in this description: SAND. Sand is composed of particles of silica in the 0.0625 mm to 2 mm size range. While sand offers excellent drainage, it does little to hold on to nutrients. Fertilizer applied to sandy soils quickly leaches away to the groundwater and is lost from your roses and garden. That is why we need to put some effort into changing the characteristics of our local soil to get the best performance from our roses. How to modify your soil is the ultimate subject of this brief article, but I will digress a bit along the way by telling you about my own journey over the last 35 years in preparing soil for Florida rose growing.

Soil scientists agree that the best soil to grow roses and many other plants is a sandy loam. A sandy loam is composed of a mixture of sand, silt, clay, and organic matter. Inorganic matter (the sand, silt, and clay) should be about 45% of the soil by volume and in the ratio of 60%: 20%: 20%. Organic matter (decomposing living matter and resulting humus) comprises about 5% of a sandy loam by volume and the remainder is air and water. The roots of roses need air, water, and nutrients. This mixture provides adequate air and good water and nutrient holding capability while still allowing water to flow freely. The latter is an important property because roses can drown if there is not adequate drainage. We need to get the soil in which we plant our new rose bushes as close to this profile as possible.

In my many years of growing roses I think I have made about every mistake possible. The first rose bushes I ever bought were planted directly in the existing soil. They never did all that well so I decided to plant them in soil with a high level of organic matter (compost) and that worked even less well. I gave up on the roses for some time thinking you can't grow these things in Florida. Finally, after visiting a local rose show, seeing some decent roses, and talking to a big guy named Ron Kast, I decided to try again. I then read in the newspaper about a class on rose growing at Leu Gardens. Ron turned out to be one of the instructors and I must admit I learned an awful lot about rose horticulture. I have made a lot of progress over the many years that have now passed since I took that course at Leu Gardens.

I became interested in rose exhibiting and began to study, talk to good rose growers, and experiment in an attempt to produce a good enough rose to at least get on the awards table. Several of the people I talked to (all excellent exhibitors) had rather elaborate rose hole formulas to prepare the ground for their roses. As an example, Alan Wolking (from Tampa) recommended digging a 36" by 18" deep hole and mixing about 2/3 of the native soil with a 40 lb bag of topsoil, a cubic foot of Canadian Peat Moss, 15-20 lbs of dehydrated cow manure, 8-10 cups of cat litter (plain and unscented type-this is a source of clay), 4 cups of Milorganite, 4-6 cups of cottonseed meal, 2-3 cups of alfalfa meal (or

pellets), 2 cups of agricultural gypsum, 2 cups fish meal, 2 cups of superphosphate, 2 cups of dolomitic limestone, and 1 cup of dry minor nutrient fertilizer. One had to mix all of this together and let it stand several weeks with frequent watering before planting the rose. The reason for the wait is that this mixture gets very hot! One had to test the temperature of the soil to make sure you could plant your rose without burning the roots. I actually used this formula for a few bushes. I had progressed a bit in my exhibiting and thought I had a rose no one could beat at the show over in Tampa. Well, Alan beat me (I did win 2nd place, King of Show). That encouraged me to try his formula and, yes, the performance of these roses was improved somewhat over others in my garden. This method, however, was way too much work and, being impatient at the time, I didn't like to wait around to put my new roses in the ground.

Like most people, I started out planting one rose at a time and continued to dig up more grass as I expanded my rose collection. One thing I learned while doing this is that our preferred rootstock, Fortuniana, is very shallow rooted but extends its roots for relatively long distances. Therefore, the plants quickly outgrew the planting hole. When adding an additional area for roses on the other side of my house, I decided to prepare the whole bed rather than single planting holes. I purchased cow manure compost, Canadian sphagnum peat moss, and finely ground pine bark. I mixed these products with my existing soil (sand) in about a 50:50 mix. I then put out a number of bags of Milorganite and began to plant my roses. To each hole I added about a cup of superphosphate. This rose bed has done reasonably well over the years but I apply mushroom compost across the whole bed about once a year. The soil is gritty, moist, and retains water well and still has good drainage.

About two years ago, when I had to take out my original large rose garden, I lost two truckloads of topsoil but still retained some of the soil that had been developed over many years. To rebuild my soil for a new rose garden I first thought that I would mix Canadian sphagnum peat moss and compost with the existing soil in a 1:1:1 ratio. But, I've become more eco-friendly over time and was trying to forgo Canadian Sphagnum Peat Moss as much as possible. While peat is useful for growing plants that require an acidic environment (such as roses) and has good water and air holding qualities, it is virtually devoid of nutrients and its mining probably causes ecological havoc. I first became aware of how important peat bogs are to the global ecosystem and how peat mining is changing them after reading an article in the magazine of Britain's National Trust. I had become a subscriber after buying a membership during a visit to Great Britain (allows entry to a great many historic buildings and gardens). They operate many of the great gardens in Britain and are now recommending against the use of peat.

So, to prepare the new soil mixture for rebuilding this original bed, I first brought in two loads of spent mushroom compost. The mushroom compost was obtained at a local mushroom farm for the excellent price of five dollars a truckload. I tilled in the compost and many bags of Milorganite and let the garden set for almost two months. I checked the pH over that time and found, as expected, that it was a bit high. Mushroom compost contains a high level of lime, hence the high pH. Ideally, one would like a pH in the 6.0-6.5 range so I began lowering it through the addition of fertilizer and elemental sulfur. I began to plant a few new roses after that time but it took me over a year to finish the garden (it took a while to obtain the varieties I desired). During that period I continued to add organic fertilizers and check the nutrient levels through soil tests. I believe I now have the soil where I want it but continue to fertilize the garden regularly to maintain nutrient levels.

After rebuilding the garden, I obtained a few new roses that "I just had to have." I was not willing to part with any roses that I had at the moment ... I had sworn that I was not going to add anything new without getting rid of something old, but there goes that New Year's resolution. I was kind of lazy this time and wanted to have a quicker an easi-

er way to expand the edge of the garden. I am not getting any younger and recently reestablishing the garden almost killed me. While at Home Depot I found a new product called "Miracle-Gro Garden Soil for Flowers and Vegetables." You mix it 50:50 with the existing soil. I bought the number of bags I needed and decided to give it a try. The results were quite good. The mixture, which included time-release fertilizer, gave my new plants a good early start and the soil mix looked good to the eye. Subsequently, I found a version of this product that is especially designed for roses, "Miracle-Gro Garden Soil for Roses". I bought a few bags to give it a try and actually like it a bit better than the more generic "flower and vegetable" one. Either provides your roses a good planting mix and is a lot easier to use than anything else I have found. It is reasonably priced as well.



So now, after telling you my history, I am ready to give you some advice about planting your new rose bushes. First of all, a bed is a lot better than a planting hole. Depending on the number of bushes you are planting, prepare the soil across the whole area. The general recommendation is to prepare the soil by mixing 1/3 Canadian sphagnum peat moss, 1/3 good topsoil (or compost), and 1/3 existing soil (sand). If you feel as I do about using peat, you might drop it from your mix (use 2/3 existing soil). Supplement this mixture with Milorganite at a rate of about 4 cups to 15 cubic feet of soil volume. Alternatively, you can buy the appropriate amount of the Miracle-Gro product mentioned above (either is OK but my preference is for the "Rose" one) and mix it 50:50. Once the bed is prepared, dig a hole about 18-20 inches deep (Fortuniana is shallow rooted) and plant your rose with the crown above the soil level (an inch or two is fine), as it will eventually sink down a bit. I normally spread about 3/4-1 cup of superphosphate about the bottom of each hole before planting. The Miracle-Gro rose product contains bone meal, a source of phosphate so the use of super phosphate with this sort of hole is optional. If you were doing a planting hole rather than a bed, I would definitely use the Miracle-Gro product in a 2-3 foot diameter hole, 18 inches deep. After allowing your amended soil to settle for about a month and your new rose bush to become established, I would at least have the pH tested. The pH should be in the 6.0-6.5 range for optimum nutrient uptake by your roses. If the pH is too low then add the appropriate amount of lime. Fertilizers tend to lower pH so lime is usually the product you will need. Elemental sulfur is used in the less likely case that the pH is too high.

Taking a little more time and spending some money preparing the soil for your roses will pay big dividends over the life of your rose bush. Don't be penny wise and pound foolish when planting your roses.

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